

## Miscellaneous Notes

### 1. ECOLOGICAL AND BEHAVIOURAL NOTES ON THE LIONTAILED MACAQUE (*MACACA SILENUS*) IN SOUTH INDIA

The Liontailed Macaque (*Macaca silenus*) has the most restricted range of all primates of the Indian subcontinent, where it is restricted to the evergreen forest of the Western Ghats (Krishnan 1971). Blanford (1888) indicated that the species occurs from 14°N. to the southern limits of the Western Ghats while Sugiyama (1968) found the species between 9°30' and 11°30'N. Krishnan (1971) indicates that it is no longer present in the forests of Thirunelveli District at Courtallam. I was very fortunate to observe the Liontailed Macaque on two consecutive days (2-3 March 1972) at the Manjolai Tea Estate of Bombay Burma Trading Company above Kalladaikurichi. This area is located in Thirunelveli District of Tamil Nadu State at about 8° 38'N., 77° 25'E. and about 1000 metres elevation. The region can be characterized as extensive tea and cardamom plantations interspersed with stands of relatively undisturbed forest.

I first observed a group of Nilgiri Langur (*Presbytis johni*) near the edge of a tea field. After several minutes an individual with the distinct, short, drooping tail of *Macaca silenus* was observed walking slowly along a branch. Later, when tea pickers moved into the area three *Macaca* were observed fleeing along with the group of langurs. A noteworthy difference in the behaviour of the two species was observed; the langur moved through the canopy with long jumps accompanied by swishing of branches while the macaque walked slowly and deliberately in single file along the interior branches of the large forest trees. Only subdued vocalizations were heard from the macaque (see below), while the langur has loud call reminiscent of the whooping of the Black Howler Monkey (*Alouatta*) of Central America.

The following morning one, and perhaps two, females with young infants were observed in the same area. Judging from the size of a known age infant in the Zoo Negara, Kuala Lumpur, Malaysia, the infant at Manjolai was about two months old in early March. Sugiyama's observations (1968) indicate January is the season of birth while Prater (1971) suggests that young are seen regularly in September.

As many as six adult individuals were counted simultaneously but no doubt more were present on March 3. Throughout the observations individuals appeared and disappeared in the forest canopy over an area of several hectares, indicating that bands spread out rather widely during feeding.

Several types of feeding activities were observed. The female with infant ate fruits of unknown identity in addition to probing into the cup formed by a broken off branch. I could not determine if water or perhaps arthropods were taken from the cavity. Another adult climbed to the uppermost branches of a tall emergent tree where several dead branches projected above the surrounding canopy. Pieces up to a foot long were broken off and torn apart, presumably in search of arthropods in the rotting wood. The macaque moved lower in the tree before dismantling the branch and then moved to the upper branches again, peered into the broken stub and tore off another dead branch. A third adult was observed feeding on small red or dark brown fruits.

In addition to the perhaps fortuitous association between the langur and macaque on 2 March I did observe one aggressive response by a macaque female with infant to the close approach of an Indian Giant Squirrel (*Ratufa indica*).

Two vocalizations were heard during these observations. One, written as *ughh* or *uhhh*, carried only very short distances. This call reminded me of a warning cry of the white-faced monkey, *Cebus capucinus*, in Panama. The second call was a *cooo* or *oooo* very similar to the single *cooo* of many pigeons but of shorter duration. This call has been reported earlier but Krishnan (1971) had questioned the nature of this call as being monosyllabic or, alternatively, polysyllabic like the modulated calls of several species of *Treron*.

The most discouraging aspect of my observations is the apparent lack of subadult individuals in this group of macaques. Several factors could be responsible for this but the most likely seems to be capturing of infants for sale in the market of large cities. I am told that young Liontailed Macaques can frequently be found in the Calcutta market despite the fact that capturing them is illegal. It seems that two major factors threaten this species: (1) Habitat destruction in its restricted range, and (2) Illegal capture of infants for sale in markets.

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## 2. NOTES ON THE BIRTH AND GROWTH OF A SLOW LORIS (*NYCTICEBUS COUCANG*) IN CAPTIVITY

A pregnant Slow Loris (*Nycticebus coucang*) received at the Nandankanan Biological Park (Orissa) on 1.ii.1971 from the forests of Assam, gave birth to a female young on 21.ii.1971. After delivery the mother weighed 1.4 kg.

The new born young weighed 50 gm and measured 14 cm in total length. The eyes were open at birth. The young had a coat of dense fur and numerous long glistening grey hairs were scattered throughout the body and projected far beyond the fur. These long hairs gradually disappeared when the young was about 11 weeks old. The body coat was grey throughout except the hands and limbs which were silvery white. The brown stripe on mid back was very prominent.

A single young is usually born (Prater 1971 ; Walker *et al.* 1964 ; Asdell 1964). Crandall (1965) reported that all births were of single young except the two twin births which were found dead within a day or two. The eyes of a Slow Loris young are open at birth (Crandall, loc. cit.). There is no mention of birth weight and size in the available literature.

Up to the age of seven weeks the young was seen clinging to the mother's abdomen and sucking her teat throughout the day. From the eighth week onwards and up to the age of 10 months, the young was clinging to the mother's abdomen throughout the day, partly keeping her hind quarters on the ground either in between the two limbs of the mother or over the mother's lap. Whenever attempts were made to handle or see the young during the day time, the mother with her baby curled up like a ball and twittered in annoyance. The mother cleaned the baby by licking. After sunset the young was always seen separated from the mother and was either clinging to the chainlink mesh wall or moving about in the house from the very first day. From the third day it was able to produce a feeble noise when handled and this noise immediately attracted the attention of the mother. Up to 8 weeks of age the young one was at times seen clinging to the abdomen of another